

Virginia Division of Consolidated Laboratory Services- Richmond, VA

TOTAL KJELDAHL NITROGEN BY		SEAL EPA-111-A REVISION 4 REVISION DATE MAY 1, 2009			
Facility Name: _____ VELAP ID _____					
Assessor Name: _____ Analyst Name: _____ Inspection Date _____					
Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____					
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
1. Is the linear calibration range determined initially, and does it contain a minimum of a blank and three standards?	Method Supplement 1, Rev. 2 (MS) 3.2.1				
2. Is linearity reestablished if any verification data exceeds initial calibration values by $\pm 10\%$ ?	MS 3.2.1				
3. Is a laboratory control sample analyzed with every batch, and is recovery assessed against current laboratory criteria? <i>NOTE: The laboratory "should" establish upper and lower control limits from control charts based on % recovery.</i>	MS 3.4.3, 3.4.3.4, 3.4.3.5				
4. Is at least one method blank carried through all the procedural steps with each batch?	MS 3.4.1.1				
5. Is the calibration verified using a calibration standard after every ten samples or every analytical batch?	MS 4.5				
6. Is a minimum of 10% of all samples spiked with the stock standard?	MS 3.3.1				
7. For compliance monitoring, is the concentration of the matrix spike at the regulatory limit OR 1 to 5 times higher than the background concentration of the sample?	MS 3.3.1.1.1				
8. Were samples digested according to a procedure acceptable on 40CFR136?	1.4				
9. Were samples preserved to pH < 2 with sulfuric acid and cooled $\leq 6^{\circ}\text{C}$ and held for no longer than 28 days?	40CFR136.3 Table II				
10. Was the Stock Sodium Nitroferricyanide Dihydrate Solution prepared to a 30 g/L concentration?	7.1				
11. Was the Digestion Reagent prepared with 134 g $\text{K}_2\text{SO}_4/\text{L}$ , 7.3 g anhydrous Copper (II) Sulfate OR 11.4 g Copper (II) Sulfate Pentahydrate/L, and 134 mL concentrated $\text{H}_2\text{SO}_4/\text{L}$ ?	7.1				

Notes/Comments:

TOTAL KJELDAHL NITROGEN BY SEAL EPA-111-A REVISION 4 "TOTAL KJELDAHL NITROGEN-N (COPPER CATALYST) IN DRINKING, GROUND AND SURFACE WATERS, DOMESTIC AND INDUSTRIAL WASTES" REVISION DATE MAY 1, 2009						PAGE 2 OF 2
Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments	
12. Was the Stock Sodium Hydroxide Solution prepared 100 g NaOH/L?	7.1					
13. Was the Stock Potassium Tartrate Solution prepared 100 g/L	7.1					
14. Was the Stock Buffer Solution prepared 67 g Na <sub>2</sub> HPO <sub>4</sub> OR 127 g Na <sub>2</sub> HPO <sub>4</sub> ·7H <sub>2</sub> O, 10 g NaOH in 500 mL deionized water?	7.1					
15. Was the Working Buffer Solution prepared 250 mL Stock Sodium Potassium Tartrate Solution, 100 mL Stock Buffer Solution, and (Table) Stock Sodium Hydroxide Solution in 500 mL DI Water?	7.1					
16. Was the Stock Alkaline Sodium Salicylate Solution prepared 75 g anhydrous Sodium Salicylate and 10 g NaOH in 500 mL DI water?	7.1					
17. Was the anhydrous ammonium chloride (NH <sub>4</sub> Cl) used to prepare standards dried at 105°C prior to use?	7.2					
18. Was the Stock Standard Solution prepared with 3.819 g NH <sub>4</sub> Cl per Liter DI water?	7.2					
19. Were samples digested at 375°C to 385°C for 30 minutes?	11.4					
20. Did the amount of DI Water added to samples to bring them back up to volume correspond to the recipe used for the Working Buffer?	11.5					

Notes/Comments: